

REMARKS

Claim 1 has been amended, claim 4 has been cancelled without prejudice or disclaimer and claim 19 has been added. Claims 1, 2 and 5-19 are pending, and claims 5-7 and 9-15 have been withdrawn from consideration. Claims 1, 9, 12, 16 and 19 are the independent claims. No new matter is presented in this Amendment.

Regarding newly added independent claim 19, it is noted that claim 19 recites, amongst other novel features, a pouch-type lithium secondary battery comprising: a battery unit, electrode tabs extending from each of the positive and negative electrode plates of the battery unit, respectively; a case having a space to accommodate the battery unit; a sealing surface along the periphery of the space; and a protection circuit board electrically connected to the electrode tabs; wherein portions of each of the electrode tabs extend outside the case, and are bent only once in an upright position with respect to a plane of the sealing surface and connect to the protection circuit board on a side opposite to an outer wall of the case.

None of the references cited, whether taken singly or combined, teach or suggest the novel features of newly added claim 19 and therefore claim 19 is in condition for allowance.

REJECTIONS UNDER 35 U.S.C. §102:

Claims 1, 2, and 8 are rejected under 35 U.S.C. §102(b) as being anticipated by Applicant's Admitted Prior Art (AAPA).

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of independent claim 1, it is noted that claim 1 recites, a pouch-type lithium secondary battery comprising: a battery unit comprising: a positive electrode plate, a separator, and a negative electrode plate, wherein the separator is disposed between the positive and negative electrode plates; electrode tabs extending from each of the positive and negative electrode plates of the battery unit, respectively; a case having a space to accommodate the battery unit; a sealing surface along the periphery of the space; and a protection circuit board electrically connected to the electrode tabs; wherein portions of each of the electrode tabs extend outside the case, and are bent at a substantially right angle with respect to a plane of the sealing surface, and wherein the protection circuit board is disposed between an outer wall of the case and the bent electrode tabs.

The Office Action relies on AAPA and in particular in FIGS. 1 and 2 for a teaching of the

features of claim 1. Applicants respectfully assert that AAPA fails to teach or suggest these novel features of independent claim 1 for at least the following reasons.

AAPA discloses a lithium secondary battery having electrode tabs extending outside the case and being bent in an S-shaped form (FIG. 2). AAPA also discloses a protection circuit board located on top of the bent electrode tab (FIG. 2). Therefore, AAPA discloses electrode tabs being bent twice, once at portions where they extend outward from the sealing surface and being bent once again in the opposite direction. Finally, AAPA discloses placing the protection circuit board on top of one of the bent electrode tabs (paragraph 0012 and FIG. 2).

Contrary to AAPA, independent claim 1 recites that the portions of each of the electrode tabs extend outside the case, and are bent at a substantially right angle with respect to a plane of the sealing surface and wherein the protection circuit board is disposed between an outer wall of the case and the bent electrode tabs. As noted above, AAPA simply discloses placing the protection circuit board on top of the bent electrode tabs and not in between an outer wall of the case and the bent electrode tab, as recited in independent claim 1. Accordingly, AAPA fails to teach or suggest at least this novel feature of independent claim 1.

Additionally, Applicants note that claim 1 recites that the electrode tabs extend outside the case, and are bent at a substantially right angle. AAPA on the other hand, simply shows the tabs bent in an S-shaped form, that is, the electrode tabs are bent almost a 180 degrees, and not at a substantially right angle. Therefore, AAPA also fails to teach or suggest this novel feature of independent claim 1.

Accordingly, Applicants respectfully assert that the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn because AAPA fails to teach or suggest each feature of independent claim 1.

Furthermore, Applicants respectfully assert that the rejection of dependent claims 2 and 8 under 35 U.S.C. §102(b) should be withdrawn at least because of their dependency from claim 1 and the reasons set forth above, and because the dependent claims include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 2 and 8 also distinguish over the prior art.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1, 2, 4, 8, and 16-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Admitted Prior Art in view of U.S. Pre-Grant Publication No. 2005/0112456.

Applicants respectfully traverse this rejection for at least the following reasons.

Regarding the rejection of independent claim 1, it is noted that claim 1 recites, a pouch-type lithium secondary battery comprising: a battery unit comprising: a positive electrode plate, a separator, and a negative electrode plate, wherein the separator is disposed between the positive and negative electrode plates; electrode tabs extending from each of the positive and negative electrode plates of the battery unit, respectively; a case having a space to accommodate the battery unit; a sealing surface along the periphery of the space; and a protection circuit board electrically connected to the electrode tabs; wherein portions of each of the electrode tabs extend outside the case, and are bent at a substantially right angle with respect to a plane of the sealing surface and wherein the protection circuit board is disposed between an outer wall of the case and the bent electrode tabs.

As noted above, AAPA simply discloses placing the protection circuit board on top of the bent electrode tabs and not in between an outer wall of the case and the bent electrode tab, as recited in independent claim 1. Accordingly, AAPA fails to teach or suggest at least this novel feature of independent claim 1.

Kozu on the other hand discloses a protection circuit board or substrate 3 having leads 4 and 5 attached to it and being bent at a substantially right angle (FIG. 5A). Kozu also discloses attaching the substrate including the leads 4 and 5 to a sealing plate 23 of the battery, and bending over the lead plates 4 and 5 so that the substrate 3 is substantially parallel to the sealing plate 23 (paragraph 0039).

Initially it is noted that although FIG. 5A of Kozu shows leads 4 and 5 bent at substantially right angles, FIG. 5A is an intermediate step in the fabrication process of the battery. It is rather FIG. 5B which illustrates the finished product and thus it is FIG. 5B which illustrates the correct angle at which the tabs are bent. Therefore, as clearly illustrated in FIG. 5B leads 4 and 5 are bent at an angle of approximately 180 degrees.

Accordingly, Kozu also discloses electrode tabs bent in a similar fashion as those illustrated in AAPA. As noted in paragraph [0015] of the specification of the present invention, when the leads are bent at angles such as 180 degrees, the tabs may be easily cut at the bent portions during the bending process. Therefore, Kozu also suffers from the drawbacks disclosed in the prior art and fails to teach the novel features of the independent claim.

Accordingly, Applicants respectfully assert that the rejection of independent claim 1 under 35 U.S.C. §103(a) should be withdrawn because neither AAPA or Kozu, whether taken singly or combined, teach or suggest each feature of independent claim 1. Furthermore, there is

no motivation to combine the references, as suggested in the Office Action, since AAPA clearly teachings bending the external leads twice at 180 degrees, while Kozu teaches bending the leads once at 180 degrees.

Regarding the rejection of independent claim 16, it is noted that this claim recites some substantially similar features as claim 1. Thus, the rejection of this claim is also traversed for the reasons set forth above.

Furthermore, Applicants respectfully assert that dependent claims 2, 8, 17 and 18 are allowable at least because of their dependency from claims 1 and 16, and because they include additional features which are not taught or suggested by the prior art. Therefore, it is respectfully submitted that claims 2, 8, 17 and 18 also distinguish over the prior art.

Regarding the rejection of dependent claim 4, it is noted that claim 4 has been cancelled without prejudice or disclaimer. Accordingly the rejection of claim 4 is moot.

DOUBLE PATENTING:

Claims 1, 4, and 8 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1 and 3-6 of copending Application No. 11/256,131. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Since claims 1 and 8 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the non-obvious nature of the claims would be premature.

As such, it is respectfully requested that Applicants be allowed to address any provisional double patenting issues remaining once the rejections of the claims under 35 U.S.C. §§102 and 103 are resolved.

Regarding the rejection of dependent claim 4, it is noted that claim 4 has been cancelled without prejudice or disclaimer. Accordingly the rejection of claim 4 is moot.

Claims 1, 2, 4, and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 11/280,463.

Since claims 1, 2 and 8 of the instant application have not yet been indicated as allowable, it is believed that any submission of a Terminal Disclaimer or arguments as to the

non-obvious nature of the claims would be premature.

As such, it is respectfully requested that Applicants be allowed to address any provisional obviousness-type double patenting issues remaining once the rejections of the claims under 35 U.S.C. §§102 and 103 are resolved.

Regarding the rejection of dependent claim 4, it is noted that claim 4 has been cancelled without prejudice or disclaimer. Accordingly the rejection of claim 4 is moot.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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